|     |      |      | •        |      |      |      | •        |     |              | •        | •   |     | •   |      |      |      | •         |      |     | •      |     |
|-----|------|------|----------|------|------|------|----------|-----|--------------|----------|-----|-----|-----|------|------|------|-----------|------|-----|--------|-----|
| 1   | GACG | CGG  | CTG      | GCA  | CTG  | GGT  | GGG      | CGC | CCA          | CAC      | GCT | CGG | CCA | CAA  | CTC  | CCG  | GGG       | CTT  | CGG | CG     | 60  |
| 1   | R    | G    | W        | Н    | W    | V    | G        | A   | H            | T        | Ŀ   | G   | H   | N    | S    | R    | G         | F    | G   | V      | 20  |
| 61  | TGGC | CAT  | AGT'     | 'GGG | CAA  | .CTA | ·<br>CAC | CGC | GGC          | GCT      | GCC | CAC | CGA | .GGC | :CGC | TCT  | ·<br>'GCG | CAC  | GGT | GC     | 120 |
| 21  | A    | Ι    | ۷.       | G    | N    | Y    | T        | A   | A            | L        | P   | T   | E   | A    | A    | L    | ·R        | T    | V   | R      | 40  |
| 121 | GCGA | .CAC | :GCT     | CCC  | GAG  | TTG  | TGC      | GGT | GCG          | CGC      | CGG | CCT | CCT | 'GCG | GCC  | 'AGA | .CTA      | CGC  | GCT | GC     | 180 |
| 41  | D    | T    | L        | P    | S    | С    | Α.       | V   | R            | A        | G   | L   | Ŀ   | R    | P    | D    | Υ.        | A    | Ŀ   | Ŀ      | 60  |
| 181 | TGGG | CCA  | .CCG     | CCA  | GCT  | GGT  | GCG      | CAC | CGA          | CTG      | CCC | CGG | CGA | .CGC | GCT  | CTT  | CGA       | CCT  | GCT | GC     | 240 |
| 61  | G    | H    | R        | Q    | L    | V    | R        | T   | D            | C .      | P   | G   | D   | A    | Ţ    | F    | D .       | L    | Ĺ   | R<br>• | 80  |
| 241 | GCAC | CTG  | GCC      | GCA  | CTT  | CAC  | CGC      | GGT | GAG          | TCT      | TCG | CAG | CCT | GCA  | CTA  | .CAC | GGC       | CCG  | CCG | CC     | 300 |
| 81  | T    | W    | Ρ.       | Н    | F    | T    | Α.       | V   | S            | L        | R   | S   | L   | H    | Y    | T    |           | R    | R   | P .    | 100 |
| 301 | CCTC | CGT  | CTA      | .CAC | AAG  | CTC  | CAC      | GAG | GCC          | CCT      | GCC | CCC | TGC | CTG  | TAA  | .CAG | CTG       | TGC  | CCG | CA     | 360 |
| 101 | S    | V    | Υ.       | T    | S    | S    | T.       | R   | P            | L        | P   | P   | Α.  | С    | N    | S    | C         | A    | R   | T .    | 120 |
| 361 | CAGC | CTC  | AGC      | CAG  | GCC  | CCC  | AAC      | TTC | CCG          | GCG      | GCA | CGT | CTA | TTC  | AGG  | AAA  | CÇT       | AGG  | CCC | AG     | 420 |
| 121 | A    | S    | Α.       | R    | P    | P    | T        | S   | R            | R        | Н   | V   | Υ.  | S    | G    | N    | L         | G    | P   | A .    | 14( |
| 421 | CCTT | TGC  | :GGG     | TCA  | CTC  | TGC  | GGG      | CAA | CAT          | CCC      | TGA | TCC | TGT | GAC  | TTC  | TGC  | СТА       | TGC. | AGC | CT     | 480 |
| 141 | F    | A    | G        | Н    | S.   | Ā    | G        | N   | Ĭ            | P        | D   | ÷   | ٧.  | T    | S    | A    | Y .       | A    | A   | S<br>• | 160 |
| 481 | CAGC | TCA  | .GCC     | CCA  | .GAC | CCA  | GCC      | AGC | CTG          | TCC      | TTT | CCC | CAG | CTC  | CTA  | ATA  | CCT       | CTA  | CCT | TT     | 54( |
| 161 | A    | Q    | Р.       | Q    | T    | Q    | P        | A   | С            | P        | F   | P   | S   | S    |      |      |           |      |     | •      | 174 |
| 541 | CCAG | CCA  | AGG      | CAT  | GGA  | .CCC | TGA      | CAC | CTG          | CCA      | ACA | GCC | CCT | CTG  | CCC  | TCA  | CAA       | CCT  | CAG | CC     | 60( |
| 601 | TGGC | CTT  | ·<br>CAT | 'GAC | TTC  | TCT  | ACC      | CAA | G <b>T</b> C | ACA      | ACC | TGT | CAG | GCT  | GCA  | CCA  | CCT       | CAT  | CCT | GG     | 66( |
| 661 | CCCG | CCG  | AAC      | CTT  | GAC  | CTC  | ACC      | CCT | GCC          | ·<br>CCT | ACC | CGA | AGG | CTC  | TCT  | GTC  | CAC       | ACA  | ACA | TG     | 720 |

FIG. 1A

| 721  | AACCTAGGCTGTGACCTTTTGCCTTCACAACCTCTGTCCAGTCCTTAATCCTGTGTTGCA | 780  |
|------|--|------|
| 781  | ATTCTCTGTCCAGACAATCTCAACTCTGAGGTTGCTTGTTTCGTCCCTGACTCCTTAACC | 840  |
| 841  | CCTGATGACAACTCTTATGCCAGCACAACTTTGACCTGATGACCTCATCCCAGCCCTTGA | 900  |
| 901  | TCGCCATCACTAAAACAATTTTAGAATCACACCTGGACAATCTCGTGCTACCTAC      | 960  |
| 961  | GCCACTCCATTTCATTAAGCTATTGACTAGCACATCCATC                     | 1020 |
| L021 | TCCTCACTCTCACTTTGGGCCACTGTCCCCTCCCTGATAAAGGGGGATATCACCACCGA  | 1080 |
| L081 | TCCCACAGAAATACAAACTACCATCAGAGAATACTATAAACACCTCTATGCAAATAAACT | 1140 |
| L041 | AGAAAAT CT AGAAGAAATGGATAAATTCCTCAACACCCACTACCAAAAAAAA       | 1200 |

## FIG. 1B

| 1          | GC      | CGT'      | TAT      | GTG           | AGG      | TAA       | LGCA      | GCT       | TTC      | TCC      | AAC           | AGA      | AGT       | TCC           | TCT       | CTC      | CTC      | AAA       | .GGC     | CCAG      | 60         |
|------------|---------|-----------|----------|---------------|----------|-----------|-----------|-----------|----------|----------|---------------|----------|-----------|---------------|-----------|----------|----------|-----------|----------|-----------|------------|
| 61         | AG      | TGT       | CCA      | GGC           | CAA      | .CCA      | ACT       | 'GAC      | CAA      | GAA      | TTA           | .CAA     | .CTG      | CTG           | AAA       | .CTG     | GCC      | TCC       | GAG      | GTTC      | 120        |
| 121        | TC      | TGC'      | TGG      | GTC           | TGT      | 'GCC      | CTG       | GAA       | .CTG     | GAG      | ACC           | CAC      | CAT<br>M  | GAA<br>K      | .GGC<br>A | CTG<br>W | GGG<br>G | TGC<br>A  | CCT<br>L | CTGG<br>W | 180<br>8   |
| 181        | AT<br>I | CGT(<br>V | GCT<br>L | TGG<br>G      | ATT<br>L | GCT<br>L  | GCT<br>L  | 'GTG<br>W | GCC<br>P | AGA<br>E | GCC<br>P      | AGG<br>G | GGC<br>A  | AGC<br>A      | CTC<br>S  | CTC<br>S | CTT<br>L | GCC<br>P  | TCT<br>L | GCTC<br>L | 240<br>28  |
| 241<br>29  | AT<br>M | GGA<br>D  | CTC<br>S | CAT<br>I      | CAT<br>I | CCA<br>Q  | GGC<br>A  | CCT<br>L  | TGC<br>A | TGA<br>E | ACT<br>L      | TGA<br>E | GCA<br>Q  | AAA<br>K      | GGT<br>V  | ACC<br>P | AGT<br>V | GAC<br>T  | TGA<br>E | GGCC<br>A | 300<br>48  |
| 301<br>49  | AG<br>S | CAT<br>I  | CAC<br>T | TGC<br>A      | CTC<br>S | TGC<br>A  | ATG<br>W  | GAT<br>I  | TCT<br>L | GTC<br>S | AGC<br>A      | CAA<br>K | GAA<br>N  | CTC<br>S      | CAG<br>S  | CAC<br>T | CCA<br>H | CAA<br>N  | TTC<br>S | CCTT<br>L | 360<br>68  |
| 361<br>69  | CA<br>H | CCA<br>Q  | GCG<br>R | CTT<br>L      | GCT<br>L | GCT<br>L  | 'GAA<br>K | .GGC<br>A | ACC<br>P | AAG<br>S | ·<br>CCA<br>H | CAA<br>N | .CAC<br>T | ·<br>TAC<br>T | AGA<br>E  | GCC<br>P | AGA<br>D | TCC<br>P  | TCA<br>H | CTCT<br>S | 420<br>88  |
| 421<br>89  | CT<br>L | CAG<br>S  | CCC<br>P | •<br>GGA<br>E | GCT<br>L | TCA<br>Q  | AGC<br>A  | ACT<br>L  | GAT<br>I | TTC<br>S | TGA<br>E      | GGT<br>V | GGC<br>A  | TCA<br>Q      | ACA<br>H  | CGA<br>D | TGT<br>V | ACA<br>Q  | GAA<br>N | TGGG<br>G | 480<br>108 |
| 481<br>109 | CG<br>R | GGA<br>E  | ATA<br>Y | TGG<br>G      | AGT<br>V | 'GGT<br>V | GCT<br>L  | 'GGC<br>A | ACC<br>P | TGA<br>D | TGG<br>G      | CTC<br>S | CAC<br>T  | CGT<br>V      | AGC<br>A  | TGT<br>V | GAA<br>K | .GCC<br>P | TCT<br>L | GCTG<br>L | 540<br>128 |
| 541<br>129 |         | TGG<br>G  |          |               |          |           |           | 'ACA<br>Q |          |          |               |          |           |               |           |          | TTC<br>S |           | TTG<br>C | TCTG<br>L | 600<br>148 |
| 601<br>149 | GC'     | TAT<br>I  | CCC<br>P | CTG<br>C      | TGA<br>D | TAC<br>T  | TGG<br>G  | AGA<br>D  | CAC<br>T | CTT<br>L | GGC<br>A      | CAA<br>N | TAT<br>I  | TAG<br>R      | AGC<br>A  | CAC<br>T | CTG<br>W | GCC<br>P  | AGG<br>G | ACTC<br>L | 660<br>168 |
| 661<br>169 | AT<br>M | GGA<br>D  | TGC<br>A | TTT<br>F      | TCC<br>P | AAA<br>N  | ATGC<br>A | CTC<br>S  | TTC<br>S | TCC<br>P | AGA<br>D      | TGT<br>V | TGG<br>G  | AGC<br>A      | CAC<br>T  | TTT<br>L | ACC<br>P | AAA<br>N  | CGA<br>D | CAAA<br>K | 720<br>188 |

FIG. 2A

|            |          |          |          |          |        |           |          |            |          |           |           |             |          |            |          |                |            |          |      |      | •           |
|------------|----------|----------|----------|----------|--------|-----------|----------|------------|----------|-----------|-----------|-------------|----------|------------|----------|----------------|------------|----------|------|------|-------------|
| 721        | GC       | CAA      | GAC      | TCC      | CAC    | CAC       | TGT      | GGA        | CAG      | ACT       | CCT       | GGC         | AAT      | CAC        | CTT      | GGC            | TGG        | TGA      | CTT  | AGGT | 780         |
| 189        | A        | K        | T        | P        | T      | T         | V        | D          | R        | L         | L         | A           | Ι        | T          | L        | A              | G          | D        | L    | G    | 208         |
|            |          |          |          |          |        |           |          |            |          |           |           |             |          |            |          |                |            |          |      | •    |             |
| 781        | CT       | GAC      | CTT      | CCT      | CCA    | .CAG      | GTC      | CCA        | GAC      | TTG       | GAG       | TCC         | TCC      | AGG        | ACT      | GGG            | AAC        | TGA      | GGG  | CTGC | 840         |
| 209        | L        | T        | F        | L        | H      | Ŕ         | S        | . Q        | T        | W         | S         | P           | P        | G          | L        | . G            | T          | E        | G    | С    | 228         |
|            |          |          |          |          |        |           |          |            |          |           | •         |             |          | •          |          |                | •          |          |      | •    |             |
| 841        | TG       | GGA      | CCA      | GCT      | TAC    | TGC       | CCC      | CAG        | GGT      | CTT       | CAC.      | ACT         | GTT      | GGA        | CCC      | CCA            | GGC        | ATC      | CAG  | GCTC | 900         |
| 229        | W        | D        | Q        | Ŀ        | T      | A         | P        | R          | V        | F         | T         | L           | L        | D          | P        | Q              | A          | \$       | R    | L    | 248         |
|            |          |          |          | •        |        |           | •        |            |          |           | •         |             |          | •          |          |                | •          |          |      |      | 0.0-        |
| 901        |          |          |          |          | CCT    |           |          |            | CTT      | _         |           | _           | TCT      | CCT        |          |                |            | CTT      |      | CCAA | 960         |
| 249        | T        | M        | A        | F        | Ŀ      | N         | G        | A          | Ŀ        | D         | G         | A           | Ŀ        | Ŀ          | G        | N              | H          | Ŀ        | S    | Q    | 268         |
| 0.61       | 71 00    |          | ma C.    | •        | CCA    |           | ,<br>acc | oom<br>Oom | C 7. C   | ርር አ      | ·<br>Com  | COM         | ከአረ      | ,<br>n ( n | Cm3.     | OUL 3          | mcc        | 7 CC     | ሞረረ  | GGTG | 1000        |
| 961<br>269 | AT<br>T  | CCC<br>P | TAG<br>R | GUU<br>P | ·H     | .CCC<br>P | AUU<br>P | UUT        | CAG<br>S | UUA!<br>H | UUT!<br>T | GCT<br>T    | aag<br>R | AGA<br>F.  | GTA<br>Y | ŲΙΑ<br>Υ       | .TGG<br>.G | AGC<br>A | I GG | V    | 1020<br>288 |
| 209        | Ţ        | r        | ĸ        | ŗ        | П      | r         | r        | L          | J        | n         | Ц         | П           | Λ        | Ŀ          | 1        | i              | G          | Н        | G    | ٧    | 200         |
| 1021       | ΔΔ       | ሞርር      | DCD      | •<br>ሞሶሶ | ርርሞ    | ርሞሞ       |          | DAG        | ል ልጥ     | ርጥጥ)      | ՐՐԸ       | מממ         | CCI      | GAA        | ርርር      | ፐርር            | ግርቦ        | արփա     | GAC' | TTCA | 1080        |
| 289        | N<br>Vm. | G        | נייסני   | Р        | V      | F         | R        | S          | N        | F         | R<br>R    | R           | 0        | N<br>N     | G        | A              | A          | L        | T.   | S    | 308         |
| 20,        | • '      | Ğ        | _        |          | •      | -         | ٠.       | Ū          | •        | -         | •         |             | ¥        | •          |          | ••             | ٠٠.        | ~        | •    | ٠.   | •••         |
| 1081       | GC       | CCC      | TAC      | CCT      | GGC    | CCA       | GCA      | GGT        | ATG      | GGA       | GGC       | CCT         | TGT      | CCT        | GTT      | ACA            | GAA        | ACT      | GGA  | GCCA | 1140        |
| 309        | A        | P        | T        | L        | A      | Q         | Q        | V          | W        | E         | A         | L           | V        | Ļ          | L        | Q              | K          | L        | Ε    | P    | 328         |
|            |          |          |          |          |        |           |          |            |          |           |           |             |          |            |          |                |            |          |      |      |             |
| 1141       | GA       | ACA      | CCT.     | ACA      | GTT    | 'GCA      | .GAA     | CAT        | TAG      | CCA       | AGA       | GCA         | GCT      | GGC        | TCA      | GGT            | AGC        | CAC      | CTT  | GGCT | 1200        |
| 329        | Ē        | Н        | L        | Q        | L      | Q         | N        | Ι          | \$       | Q         | E         | Q           | L        | $A^{-}$    | Q        | V              | A          | T        | L    | A    | 348         |
|            |          |          |          |          |        |           |          |            |          |           | •         |             |          | •          |          |                |            |          |      | •    |             |
| 1201       |          |          |          |          |        |           |          |            |          |           |           |             |          |            |          |                |            |          |      | TTGG |             |
| 349        | T        | K        | E        | F        | T      | E         | A        | F          | Ŀ        | G         | С         | P           | A        | I          | H        | P              | R          | C        | R    | M    | 368         |
|            |          |          |          |          |        |           |          |            |          |           |           |             |          |            |          |                | •          |          |      | •    |             |
| 1261       |          |          |          |          |        |           |          |            |          |           |           |             |          |            |          |                |            |          |      |      |             |
| 369        | G        | A        | A        | P        | Y      | R         | G        | H          | P        | T         | P         | L           | R        | L          | P        | L              | G          | F        | L    | Y    | 388         |
| 1 2 2 4    |          |          |          |          | 3 CC - |           |          |            |          |           | •<br>om • | <b>43</b> - |          |            | 007      | 07 C           | ·          | 000      | 000  |      | 1000        |
| 1321       |          |          |          |          |        |           |          |            |          |           |           |             |          |            |          |                |            |          |      |      |             |
| 389        | V        | Н        | H        | T        | Υ.     | V         | Р        | A          | Ъ        | Р         | C         | T           | Т        | F,         | Q        | S <sub>.</sub> | C          | A        | A    | Ŋ    | 408         |

FIG. 2B

|      | •                      | _    |
|------|--|------|
| 1381 | ATGCGCTCCATGCAGCGTTTCCACCAGGATGTGCGCAAGTGGGATGACATCGGCTACAGT | 1440 |
| 409  | MRSMQRFHQDVRKWDDIGYS   | 428  |
| 1441 | TTCGTGGTAGGCTCCGACGGCTATCTGTACCAGGGCCGTGGCTGGC               | 1500 |
| 429  | F V V G S D G Y L Y Q G R G W H W V G A                      | 448  |
| 1501 | CACACACGCGGCTACAACTCCCGCGGCTTCGGTGTGGCCTTCGTGGGCAACTACACTGGG | 1560 |
| 449  | H T R G Y N S R G F G V A F V G N Y T G                      | 468  |
| 1561 | TCACTGCCCAACGAAGCTGCGCTGAACACGGTGCGCGACGCGCTCCCGAGCTGCGCAATT | 1620 |
| 469  | S L P N E A A L N T V R D A L P S C A I                      | 488  |
| 1621 | CGCGAAGGTCTCTTGCGGCCAGACTACAAGCTGCTTGGCCACCGCCAGCTAGTGCTCACC | 1680 |
| 489  | REGLLRPDYKLLGHRQLVLT   | 508  |
| 1681 | CACTGCCCCGGGAACGCGCTCTTCAACTTGCTGCGCACCTGGCCTCACTTCACAGAGGTT | 1740 |
| 509  | H C P G N A L F N L L R T W P H F T E V                      | 528  |
| 1741 | GAAAACTAAGAACTCCTTTGAGAGACCCTTGAAGATCCAGGAGGTATTATCCCTGATGAT | 1800 |
| 529  | E N *  | 531  |
| 1801 | CCTTTGAGCAACCACAGACCTCCAATAAAGGGACCACTGAAAGGAAAAAAAA         | 1860 |
| 1861 | аааааааааааааа 1876  |      |

FIG. 2C

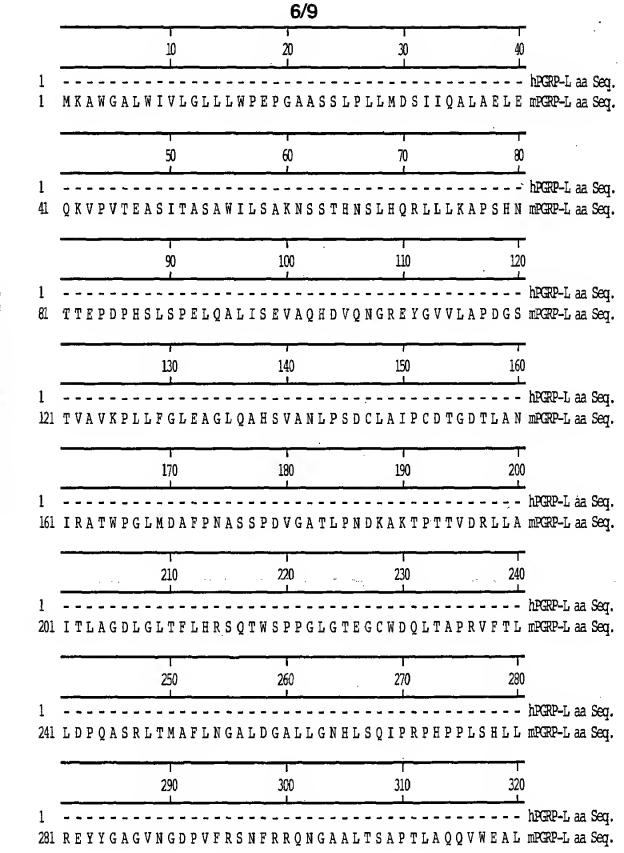


FIG. 3A

